Furman
167715

```
=> fil reg; s q.yn.pnptad.ktav..ssdf.a.li/sqsp
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=> d 1-16 .bevreg; fil ca; s l1

L1   ANSWER 1 OF 16  REGISTRY  COPYRIGHT 1994 ACS
RN   152479-24-8  REGISTRY
CN   INDEX NAME NOT YET ASSIGNED
SQL  77
MF   Unspecified
CI   MAN

L1   ANSWER 2 OF 16  REGISTRY  COPYRIGHT 1994 ACS
RN   133723-39-4  REGISTRY
CN   Glycolipoprotein MACIF (human clone p352-3 protein moiety reduced),
     N-L-methionyl- (9CI)  (CA INDEX NAME)
SQL  104
MF   Unspecified
CI   MAN

L1   ANSWER 3 OF 16  REGISTRY  COPYRIGHT 1994 ACS
RN   133722-42-6  REGISTRY
CN   1-86-Antigen CD 59 (human clone p352-3 protein moiety reduced),
     N-L-methionyl- (9CI)  (CA INDEX NAME)
OTHER NAMES:
CN   1-86-Glycolipoprotein MACIF (human clone p352-3 protein moiety
     reduced), N-L-methionyl-
SQL  87
MF   C424 H654 N116 O149 S11
CI   MAN

L1   ANSWER 4 OF 16  REGISTRY  COPYRIGHT 1994 ACS
RN   133722-41-5  REGISTRY
CN   1-86-Antigen CD 59 (human clone p352-3 protein moiety reduced) (9CI)
     (CA INDEX NAME)
OTHER NAMES:
CN   1-86-Glycolipoprotein MACIF (human clone p352-3 protein moiety
     reduced)
SQL  86
MF   C419 H645 N115 O138 S10
CI   MAN

L1   ANSWER 5 OF 16  REGISTRY  COPYRIGHT 1994 ACS
RN   133722-40-4  REGISTRY
CN   1-82-Antigen CD 59 (human clone p352-3 protein moiety reduced),
     N-L-methionyl- (9CI)  (CA INDEX NAME)
OTHER NAMES:
```

OTHER NAMES:
CN 1-82-Glycolipoprotein MACIF (human clone p352-3 protein moiety reduced), N-L-methionyl-
SQL 83
MF C406 H623 N111 O141 S11
CI MAN

L1 ANSWER 6 OF 16 REGISTRY COPYRIGHT 1994 ACS
RN 133722-39-1 REGISTRY
CN 1-82-Antigen CD 59 (human clone p352-3 protein moiety reduced) (9CI) (CA INDEX NAME)
OTHER NAMES:
CN 1-82-Glycolipoprotein MACIF (human clone p352-3 protein moiety reduced)
SQL 82
MF C401 H614 N110 O130 S10
CI MAN

L1 ANSWER 7 OF 16 REGISTRY COPYRIGHT 1994 ACS
RN 133722-36-8 REGISTRY
CN 1-77-Antigen CD 59 (human clone p352-3 protein moiety reduced), N-L-methionyl- (9CI) (CA INDEX NAME)
OTHER NAMES:
CN 1-77-Glycolipoprotein MACIF (human clone p352-3 protein moiety reduced), N-L-methionyl-
SQL 78
MF C389 H594 N106 O134 S11
CI MAN

L1 ANSWER 8 OF 16 REGISTRY COPYRIGHT 1994 ACS
RN 133722-35-7 REGISTRY
CN 1-76-Antigen CD 59 (human clone p352-3 protein moiety reduced), N-L-methionyl- (9CI) (CA INDEX NAME)
OTHER NAMES:
CN 1-76-Glycolipoprotein MACIF (human clone p352-3 protein moiety reduced), N-L-methionyl-
SQL 77
MF C385 H588 N104 O122 S11
CI MAN

L1 ANSWER 9 OF 16 REGISTRY COPYRIGHT 1994 ACS
RN 133722-34-6 REGISTRY
CN 1-77-Antigen CD 59 (human clone p352-3 protein moiety reduced) (9CI) (CA INDEX NAME)
OTHER NAMES:
CN 1-77-Glycolipoprotein MACIF (human clone p352-3 protein moiety reduced)
SQL 77
MF C384 H585 N105 O123 S10
CI MAN

L1 ANSWER 10 OF 16 REGISTRY COPYRIGHT 1994 ACS
RN 133722-33-5 REGISTRY
CN 1-75-Antigen CD 59 (human clone p352-3 protein moiety reduced), N-L-methionyl- (9CI) (CA INDEX NAME)
OTHER NAMES:
CN 1-75-Glycolipoprotein MACIF (human clone p352-3 protein moiety reduced), N-L-methionyl-
SQL 76
MF C380 H581 N103 O129 S11
CI MAN

L1 ANSWER 11 OF 16 REGISTRY COPYRIGHT 1994 ACS
RN 133722-32-4 REGISTRY
CN 1-76-Antigen CD 59 (human clone p352-3 protein moiety reduced) (9CI) (CA INDEX NAME)
OTHER NAMES:
CN 1-76-Glycolipoprotein MACIF (human clone p352-3 protein moiety reduced)
SQL 76
MF C380 H579 N103 O121 S10
CI MAN

L1 ANSWER 12 OF 16 REGISTRY COPYRIGHT 1994 ACS
RN 133722-31-3 REGISTRY
CN 1-75-Antigen CD 59 (human clone p352-3 protein moiety reduced) (9CI) (CA INDEX NAME)
OTHER NAMES:
CN 1-75-Glycolipoprotein MACIF (human clone p352-3 protein moiety reduced)
SQL 75
MF C375 H572 N102 O118 S10
CI MAN

L1 ANSWER 13 OF 16 REGISTRY COPYRIGHT 1994 ACS
RN 133722-30-2 REGISTRY
CN 1-70-Antigen CD 59 (human clone p352-3 protein moiety reduced), N-L-methionyl- (9CI) (CA INDEX NAME)
OTHER NAMES:
CN 1-70-Glycolipoprotein MACIF (human clone p352-3 protein moiety reduced), N-L-methionyl-
SQL 71
MF C351 H540 N96 O120 S11
CI MAN

L1 ANSWER 14 OF 16 REGISTRY COPYRIGHT 1994 ACS
RN 133722-28-8 REGISTRY
CN 1-70-Antigen CD 59 (human clone p352-3 protein moiety reduced) (9CI) (CA INDEX NAME)
OTHER NAMES:
CN 1-70-Glycolipoprotein MACIF (human clone p352-3 protein moiety reduced)
SQL 70
MF C346 H531 N95 O119 S10
CI MAN

L1 ANSWER 15 OF 16 REGISTRY COPYRIGHT 1994 ACS
RN 126546-13-2 REGISTRY
CN Antigen CD 59 (human clone YTH 53.1/1 protein moiety reduced) (9CI) (CA INDEX NAME)
OTHER NAMES:
CN Antigen 1F 5 (human protein moiety reduced)
CN Antigen CD 59 (human clone K-562-3 protein moiety reduced)
CN Antigen CD 59 (human clone R18 protein moiety reduced)
CN Glycolipoprotein HRF 20 (human clone pUIF10 protein moiety reduced)
CN Glycolipoprotein HRF 20 (human clone pUIF10 reduced)
CN Glycolipoprotein MACIF (human clone p352-3 protein moiety reduced)
SQL 103
MF Unspecified
CI MAN

L1 ANSWER 16 OF 16 REGISTRY COPYRIGHT 1994 ACS
RN 126546-12-1 REGISTRY

RN 126546-12-1 REGISTRY
CN Antigen CD 59 (human clone YTH53.1/1 precursor protein moiety reduced) (9CI) (CA INDEX NAME)
OTHER NAMES:
CN Antigen 1F 5 (human precursor protein moiety reduced)
CN Antigen CD 59 (human clone K-562-3 precursor protein moiety reduced)
CN Antigen CD 59 (human clone R18 precursor protein moiety reduced)
CN Glycolipoprotein HRF 20 (human clone pUIF10 precursor protein moiety reduced)
CN Glycolipoprotein HRF 20 (human clone pUIF10 precursor reduced)
CN Glycolipoprotein MACIF (human clone p352-3 precursor protein moiety reduced)
SQL 128
MF Unspecified
CI MAN

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FILE COVERS 1967 - 28 May 1994 (940528/ED) VOL 120 ISS 22

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L2 13 L1

=> d 1-13 .bevstr; fil caprev; s l1

L2 ANSWER 1 OF 13 CA COPYRIGHT 1994 ACS
AN CA120(7):71831d CA
TI Determination of carboxyl-terminal residue and disulfide bonds of MACIF (CD59), a glycosyl-phosphatidylinositol-anchored membrane protein
AU Sugita, Yuji; Nakano, Yasuko; Oda, Eiichi; Noda, Keiichi; Tobe, Takashi; Miura, Nam Ho; Tomita, Motowo
CS Sch. Pharm. Sci., Showa Univ.
LO Tokyo 142, Japan
SO J. Biochem. (Tokyo), 114(4), 473-7
SC 6-3 (General Biochemistry)
DT J
CO JOBIAO
IS 0021-924X
PY 1993
LA Eng
AN CA120(7):71831d CA
AB MACIF (CD59) is a glycosyl-phosphatidylinositol (GPI)-anchored membrane glycoprotein which inhibits the formation of the membrane attack complex of human complement. MACIF prepd. from human erythrocyte membranes was digested with pronase. When the digest was subjected to 2-phase partition with BuOH and 0.1N HCl, the C-terminal peptide was recovered in the BuOH phase because of the attachment of the highly hydrophobic GPI. The amino acid sequence of the peptide was detd. to be Asn-72 at its N-terminus and up to Glu-76, whhereas the presence of Asn-77 was ambiguous. To allow unequivocal detn. of the C-terminus, a sol. form of MACIF was prepd. from human urine on a large scale. The C-terminal peptide from the sol. form was prepd. by tryptic digestion followed by reversed-phase HPLC. The sequence and compn. of the peptide unequivocally revealed

HPLC. The sequence and compn. of the peptide unequivocally revealed Asn-77 as the C-terminus. The pattern of disulfide bonds of MACIF was also detd. with the membrane form as well as the sol. form. Cystine-contg. peptides were prepd. by chymotryptic and tryptic digestion, purified by HPLC, and their amino acid sequences were detd. The results indicated that disulfide bonds were formed at Cys-3-Cys-26, Cys-6-Cys-13, Cys-19-Cys-39, Cys-45-Cys-63(or 64), and Cys-63(or 64)-Cys-69.

IT **152479-24-8**
(of erythrocytes, of human)

L2 ANSWER 2 OF 13 CA COPYRIGHT 1994 ACS
AN CA119(17):175211x CA
TI Structure of the CD59-encoding gene: further evidence of a relationship to murine lymphocyte antigen Ly-6 protein. [Erratum to document cited in CA119(7):64326u]
AU Petranka, John G.; Fleenor, Donald E.; Sykes, Kathryn; Kaufman, Russel E.; Rosse, Wendell F.
CS Med. Cent., Duke Univ.
LO Durham, NC 27710, USA
SO Proc. Natl. Acad. Sci. U. S. A., 90(12), 5878
SC 3-3 (Biochemical Genetics)
SX 13, 15
DT J
CO PNASA6
IS 0027-8424
PY 1993
LA Eng
AN CA119(17):175211x CA
AB An error in mapping a 4.5-kb EcoRI restriction band has been cor. The size est. for intron 1 has consequently been increased. A revised restriction map for intron 1 has been presented. The error was not reflected in the abstr. or the index entries.

IT **126546-12-1**, Antigen CD 59 (human clone YTH53.1/1 precursor protein moiety reduced)
(amino acid sequence of, complete (Erratum))

L2 ANSWER 3 OF 13 CA COPYRIGHT 1994 ACS
AN CA119(7):64326u CA
TI Structure of the CD59-encoding gene: Further evidence of a relationship to murine lymphocyte antigen Ly-6 protein
AU Petranka, John G.; Fleenor, Donald E.; Sykes, Kathryn; Kaufman, Russel E.; Rosse, Wendell F.
CS Med. Cent., Duke Univ.
LO Durham, NC 27710, USA
SO Proc. Natl. Acad. Sci. U. S. A., 89(17), 7876-9
SC 3-3 (Biochemical Genetics)
SX 13, 15
DT J
CO PNASA6
IS 0027-8424
PY 1992
LA Eng
AN CA119(7):64326u CA
AB The gene for CD59 [membrane inhibitor of reactive lysis (MIRL), protectin], a phosphatidylinositol-linked surface glycoprotein that regulates the formation of the polymeric C9 complex of complement and that is deficient on the abnormal hematopoietic cells of patients with paroxysmal nocturnal hemoglobinuria, consists of four exons spanning 20 kilobases. The untranslated first exon is preceded by a G+C-rich promoter region that lacks a consensus TATA or CAAT motif. The second exon encodes the hydrophobic leader sequence of

motif. The second exon encodes the hydrophobic leader sequence of the protein, and the third exon encodes the amino-terminal portion of the mature protein. The fourth exon encodes the remainder of the mature protein, including the hydrophobic sequence necessary for glycosyl-phosphatidylinositol anchor attachment. The structure of the CD59 gene is very similar to that encoding Ly-6, a murine glycoprotein with which CD59 has some structural similarity. The striking similarity in gene structure is further evidence that the two proteins belong to a superfamily of proteins that may also include the urokinase plasminogen-activator receptor and a squid glycoprotein of unknown function.

IT **126546-12-1**, Antigen CD 59 (human clone YTH53.1/1 precursor protein moiety reduced)
(amino acid sequence of, complete)

L2 ANSWER 4 OF 13 CA COPYRIGHT 1994 ACS
AN CA118(20):198171c CA
TI Genetically engineered cells as universal donor cells for vascular grafts or drug delivery
IN Sims, Peter J.; Bothwell, Alfred L. M.; Elliot, Eileen A.; Flavell, Richard A.; Madri, Joseph; Rollins, Scott; Bell, Leonard; Squinto, Stephen
PA Oklahoma Medical Research Foundation; Yale University
LO USA
SO PCT Int. Appl., 88 pp.
PI WO 9302188 A1 930204
DS W: CA, JP
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LU, MC, NL, SE
AI WO 92-US5920 920714
PRAI US 91-729926 910715
US 92-906394 920629
SC 63-3 (Pharmaceuticals)
SX 3, 15
DT P
CO PIXXD2
PY 1993
LA Eng
AN CA118(20):198171c CA
AB Genetically engineered cells are provided which can serve as universal donor cells in such applications as reconstruction of vascular linings or the administration of therapeutic agents. The cells include a DNA sequence which is expressed by the cell and which codes for a protein having complement inhibitory activity and which provides protection against complement-based lysis, i.e., hyperacute rejection. In addn., the cell's natural genome is changed so that proteins encoded by either the class II or both the class I and the class II major histocompatibility complex genes do not appear on the cell's surface. In this way, attack by T-cells is avoided. Optionally, the cells can include a self-destruction mechanism so that they can be removed from the host when no longer needed. The cells may further comprise of polynucleotide coding for a therapeutic agent which is expressed and secreted by the cell. When cDNA encoding the human CD59 antigen was stably incorporated into the genome of porcine aortic endothelial cells (PAEC) and expressed on the cell surface, the cells were protected from complement-mediated attack as assayed by human complement-mediated cell lysis in vitro. The recombinant PAEC had similar biol. behavior as normal PAEC in terms of proliferation rates, not overgrowing monolayers or growing in suspension, and being contact inhibited. Addnl., the recombinant PAEC were capable of attaching to a synthetic Gortex graft as well as normal endothelial cells.

IT **126546-13-2**, CD59 antigen (human reduced)

IT **126546-13-2**, CD59 antigen (human reduced)
(amino acid sequence of and expression of gene for, on cell surface of recombinant cells)

L2 ANSWER 5 OF 13 CA COPYRIGHT 1994 ACS
AN CA115(17):176706s CA
TI Molecular cloning of cDNA for human lymphocyte surface antigen CD59
IN Sawada, Ritsuko; Naruto, Masanobu
PA Toray Industries, Inc.
LO Japan
SO Jpn. Kokai Tokkyo Koho, 16 pp.
PI JP 03081297 A2 910405 Heisei
AI JP 89-218183 890823
SC 3-4 (Biochemical Genetics)
SX 15
DT P
CO JKXXAF
PY 1991
LA Japan
AN CA115(17):176706s CA
AB The cDNA encoding human lymphocyte surface antigen CD59, a human counterpart of the mouse antigen Ly-6 and that is recognized by the anti-Ly-6 monoclonal antibody MEM43, is cloned and sequenced. A cDNA library prepd. from human peri[heral monocytes was screened using a 350 base pair probe, which was obtained in a preparatory hybridization using 3 synthetic oligonucleotide probes (Ly-61, Ly-2, and Ly-3) that encoded the N-terminal amino acids of an antigen recognized by MEM43. Clones 5 and 18 contg. the same CD59-encoding cDNA but different flanking regions were isolated.
IT **126546-12-1**, Antigen CD 59 (human clone YTH53.1/1 precursor protein moiety reduced) **126546-13-2**, Antigen CD 59 (human clone YTH 53.1/1 protein moiety reduced)
(amino acid sequence of and cloning in Escherichia coli of cDNA for)

L2 ANSWER 6 OF 13 CA COPYRIGHT 1994 ACS
AN CA115(7):66207x CA
TI Human lymphocyte surface antigen comparable to mouse Ly6 antigen and its cDNA cloning
IN Sawada, Ritsuko; Naruto, Masanobu
PA Toray Industries, Inc.
LO Japan
SO Jpn. Kokai Tokkyo Koho, 12 pp.
PI JP 03048696 A2 910301 Heisei
AI JP 89-183264 890714
SC 3-4 (Biochemical Genetics)
SX 15
DT P
CO JKXXAF
PY 1991
LA Japan
AN CA115(7):66207x CA
AB A cDNA encoding a human lymphocyte surface antigen that is comparable to the mouse lymphocyte antigen Ly6 is cloned, sequenced, and its amino acid sequence deduced. Three synthetic oligonucleotide probes were prepd. according to the 17 N-terminal amino acid sequences of human antigen CD59 that was recognized by monoclonal antibody MEM43 and was considered comparable to the Ly6 antigen. The cDNA libraries of human monocytic leukemic cell line J111 and peripheral lymphocytes were amplified by polymerase chain reaction and screened with the 3 probes to obtain clone P-1 carrying the cDNA for the human counterpart of the mouse Ly6 antigen.

for the human counterpart of the mouse Ly6 antigen.
IT **126546-13-2**, Antigen CD 59 (human clone YTH 53.1/1 protein moiety reduced)
(amino acid sequence of and cloning in Escherichia coli of cDNA for)

L2 ANSWER 7 OF 13 CA COPYRIGHT 1994 ACS
AN CA114(21):201135u CA
TI Cloning and expression of human membrane attack complex inhibition factor (MACIF) gene
IN Tomita, Motowo; Sugita, Yuji; Takemoto, Toshiyuki; Furuichi, Kiyoshi; Takayama, Makoto; Yusakawa, Ko; Yano, Shinya; Yamaji, Noboru; Ito, Katsuhisa
PA Yamanouchi Pharmaceutical Co., Ltd.
LO Japan
SO Eur. Pat. Appl., 49 pp.
PI EP 394035 A2 901024
DS R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE
AI EP 90-304203 900419
PRAI JP 89-103088 890421
JP 89-179933 890712
JP 89-230983 890906
JP 89-238246 890913
JP 89-247818 890921
JP 89-281197 891027
SC 3-4 (Biochemical Genetics)
DT P
CO EPXXDW
PY 1990
LA Eng
OS MARPAT 114:201135
AN CA114(21):201135u CA
AB Human MACIF (I) and its biol. active fragment cDNAs are cloned and expressed in animal or microbial cells. From a cDNA library of human monocyte in pGEM4, I cDNA was cloned by the colony hybridization method using 2 DNA probes encoding N and C-terminal fragments, resp., of I. I was produced in CHO cells as a phosphatidylinositol-anchored protein on the cell membrane. Also given was the expression of cDNA for I and its fragments in Escherichia coli and CHO cells.
IT **133722-30-2 133722-33-5 133722-35-7 133722-36-8 133722-40-4 133722-42-6 133723-39-4**
(amino acid sequence of)
IT **126546-12-1**, Antigen CD 59 (human clone YTH53.1/1 precursor protein moiety reduced)
(amino acid sequence of and cloning in Escherichia coli of cDNA for)
IT **133722-28-8**, 1-70-Antigen CD 59 (human clone p352-3 protein moiety reduced) **133722-31-3**, 1-75-Antigen CD 59 (human clone p352-3 protein moiety reduced) **133722-32-4**, 1-76-Antigen CD 59 (human clone p352-3 protein moiety reduced) **133722-34-6**, 1-77-Antigen CD 59 (human clone p352-3 protein moiety reduced) **133722-39-1**, 1-82-Antigen CD 59 (human clone p352-3 protein moiety reduced) **133722-41-5**, 1-86-Antigen CD 59 (human clone p352-3 protein moiety reduced)
(amino acid sequence of and expression in CHO cells of cDNA for)

L2 ANSWER 8 OF 13 CA COPYRIGHT 1994 ACS
AN CA113(19):166413p CA
TI Isolation and expression of the full-length cDNA encoding CD59 antigen of human lymphocytes
AU Sawada, Ritsuko; Ohashi, Kensaku; Anaguchi, Hiroyuki; Okazaki,

AU Sawada, Ritsuko; Ohashi, Kensaku; Anaguchi, Hiroyuki; Okazaki, Hitoaki; Hattori, Masakazu; Minato, Nagahiro; Naruto, Masanobu
CS Basic Res. Lab., Toray Ind., Inc.
LO Kamakura 248, Japan
SO DNA Cell Biol., 9(3), 213-20
SC 3-3 (Biochemical Genetics)
SX 13, 15
DT J
CO DCEBE8
IS 1044-5498
PY 1990
LA Eng
AN CA113(19):166413p CA
AB To identify the primary structure of CD59 antigen and to elucidate its function, a full-length cDNA clone of CD59 was isolated. The cDNA sequence contained an open reading frame that encodes a 128-amino-acid peptide. The amino-terminal 25 amino acids represented a typical signal peptide sequence, and the carboxy-terminal hydrophobic amino acids were characteristic for phosphatidylinositol-anchored proteins. The predicted mature protein sequence showed 35% homol. with murine Ly-6C.1 and 31% with Ly-6A.2. The no. and the distribution of cysteine residues were conserved, implying that the CD59 represented a human homolog of murine Ly-6. RNA blot hybridization anal. revealed the expression of CD59 mRNA in placental, lung, and pancreatic tissues. The mRNA was not only expressed in T-cell lines but in some monocytic, myeloid, and B-cell lines. In all of these tissues and cell lines, at least 4 mRNA species were detected. DNA blot hybridization anal. revealed a rather simple genomic structure, which suggested a single gene as compared with the complex multigene family of murine Ly-6.
IT **129817-69-2**, Antigen CD 59 (human clone R18 precursor protein moiety reduced) **129817-70-5**, Antigen CD 59 (human clone R18 protein moiety reduced)
(amino acid sequence of)

L2 ANSWER 9 OF 13 CA COPYRIGHT 1994 ACS
AN CA113(11):92818a CA
TI Cloning of the gene for a human complement-mediated cell membrane damage-inhibiting glycoprotein
IN Okada, Hidechika; Okada, Noriko; Nagami, Yoichi; Takahashi, Kazuhiro; Takizawa, Hisao; Kondo, Jun
PA Mitsubishi Kasei Corp.
LO Japan
SO Eur. Pat. Appl., 25 pp.
PI EP 351313 A2 900117
DS R: BE, CH, DE, FR, GB, IT, LI, NL, SE
AI EP 89-401996 890711
PRAI JP 88-172187 880711
JP 89-129944 890523
SC 3-4 (Biochemical Genetics)
SX 13, 15
DT P
CO EPXXDW
PY 1990
LA Eng
AN CA113(11):92818a CA
AB The gene for a complement-mediated cell-membrane damage-inhibiting N-glycosidated protein (20-25 kilodalton) contg. phosphatidylinositol was isolated from a human placental cDNA library in .lambda. gt11 using probes derived fromthe amino acid sequence of the antigen (antigen 1F5). The 1F5 antigen, recognized by antibody 1F5 isolated from a hybridoma that causes

by antibody 1F5 isolated from a hybridoma that causes complement-mediated hemolysis of neuraminidase-digested human erythrocytes, was isolated from solubilized human erythrocyte membranes. The 1F5 antigen was immune-affinity purified using 1F5 antibody and shownto contain phosphatidylinositol, was N-glycosidated, and had a mol. wt. of 20-25.times. 103. Poly (A)+ RNA of K562 cells was used to prep. 1F5 antigen cDNA probes by polymerase chain reaction, and the probes used to screen the cDNA library. Clones contg. 1.2-1.8 kb inserts were shown to contain common 500 bp Eco RI-Bam HI restriction fragment. Four clones contd. a full length cDNA for 1F5 antigen of 387 bp corresponding to a 128 amino acid protein including a 25 amino acid N-terminal signal peptide.

IT **128794-22-9**, Antigen 1F 5 (human protein moiety reduced)
(amino acid sequence of)

IT **128794-21-8**, Antigen 1F 5 (human precursor protein moiety reduced)
(amino acid sequence of and cloning in Escherichia coli of cDNA for)

L2 ANSWER 10 OF 13 CA COPYRIGHT 1994 ACS

AN CA113(7):56944e CA

TI The CD59 antigen is a structural homolog of murine Ly-6 antigens but lacks interferon inducibility

AU Philbrick, William M.; Palfree, Roger G. E.; Maher, Stephen E.; Bridgett, Margot M.; Sirlin, Sonia; Bothwell, Alfred L. M.

CS Med. Sch., Yale Univ.

LO New Haven, CT, USA

SO Eur. J. Immunol., 20(1), 87-92

SC 15-2 (Immunochemistry)

DT J

CO EJIMAF

IS 0014-2980

PY 1990

LA Eng

AN CA113(7):56944e CA

AB A cDNA encoding the human leukocyte antigen CD59 has been isolated from the erythroid cell line K-562 and its identity confirmed through expression in COS cells. Northern blotting reveals 3 message species of approx. 800, 1400, and 2000 bases in size, which are constitutively expressed in all lymphoid, erythroid, myeloid, and neural cell types tested thus far. Southern blotting of human DNA indicates a pattern consistent with the presence of a single gene, which has been mapped to chromosome 11 by somatic cell hybrids. Also, the finding of a transcriptionally active cross-hybridizing gene in monkey cells suggests conservation of CD59 sequences among primates. Comparison of the CD59 protein sequence with those of the Ly-6E and Ly-6C antigens discloses a similarity in overall structure, including the alignment of abundant cysteine residues, hydrophobic C termini and conservation of amino acids surrounding the proposed phosphatidylinositol-glycan modification site for Ly-6 mols. Unlike Ly-6, however, CD59 expression does not appear to be inducible with interferons. This, along with its limited homol. and different tissue distribution, cast doubt upon the functional equivalence of CD59 and either of the well-characterized mouse Ly-6 proteins.

IT **128415-65-6**, Antigen CD 59 (human clone K-562-3 precursor protein moiety reduced) **128415-66-7**, Antigen CD 59 (human clone K-562-3 protein moiety reduced)
(amino acid sequence of)

L2 ANSWER 11 OF 13 CA COPYRIGHT 1994 ACS

L2 ANSWER 11 OF 13 CA COPYRIGHT 1994 ACS
AN CA112(21):196393d CA
TI 20 KDa homologous restriction factor of complement resembles T cell activating protein
AU Okada, Hidechika; Nagami, Yoichi; Takahashi, Kazuhiro; Okada, Noriko; Hideshima, Teru; Takizawa, Hisao; Kondo, Jun
CS Sch. Med., Nagoya City Univ.
LO Nagoya 467, Japan
SO Biochem. Biophys. Res. Commun., 162(3), 1553-9
SC 15-4 (Immunochemistry)
SX 3
DT J
CO BBRCA9
IS 0006-291X
PY 1989
LA Eng
AN CA112(21):196393d CA
AB The authors have previously identified a 20 KDa membrane glycoprotein 1F5 antigen which inhibits the assembly of homologous complement membrane attack complexes and it was designated as HRF20 standing for 20 KDa homologous restriction factor. The amino acid sequence deduced from its coding base sequence resembles that of T cell-activating protein, most conspicuously in cysteine residues, 10 out of 11 of which occupy identical positions in an overall sequence homol. of 24.8%. Proliferation of human T cells was stimulated by monoclonal antibody to HRF20.
IT **126805-73-0**, Glycolipoprotein HRF 20 (human clone pUIF10 precursor reduced) **126805-74-1**, Glycolipoprotein HRF 20 (human clone pUIF10 reduced)
(amino acid sequence of)

L2 ANSWER 12 OF 13 CA COPYRIGHT 1994 ACS
AN CA112(21):192901v CA
TI Molecular cloning and characterization of MACIF, an inhibitor of membrane channel formation of complement
AU Sugita, Yuji; Tobe, Takashi; Oda, Eiichi; Tomita, Motowo; Yasukawa, Ko; Yamaji, Noboru; Takemoto, Toshiyuki; Furuichi, Kiyoshi; Takayama, Makoto; Yano, Shinya
CS Sch. Pharm. Sci., Showa Univ.
LO Tokyo 142, Japan
SO J. Biochem. (Tokyo), 106(4), 555-7
SC 3-3 (Biochemical Genetics)
SX 6, 13
DT J
CO JOBIAO
IS 0021-924X
PY 1989
LA Eng
AN CA112(21):192901v CA
AB Human erythrocytes contain a membrane protein, MACIF, which inhibits the formation of a membrane attack complex (MAC) of complement. The authors cloned and sequenced the cDNA of MACIF mRNA. The amino acid sequence predicted from its nucleotide sequence consists of 128 amino acids. The amino-terminal 25 residues may correspond to a signal peptide. The carboxy-terminal sequence confirmed that MACIF is a glycosylphosphatidylinositol (GPI)-anchored protein. The amino acid sequence of MACIF was partially detd. by established techniques for protein chem., and the resultant sequence was consistent with that predicted from the nucleotide sequence. The results of sequence analyses also suggested that asparagine at the 18th position was N-glycosylated. When mRNA obtained from the MACIF cDNA clone with SP6 RNA polymerase was microinjected into Xenopus oocytes, the

SP6 RNA polymerase was microinjected into Xenopus oocytes, the oocytes synthesized a product which exhibited MACIF activity and reacted with anti-MACIF antibody. Comparison of the predicted sequence revealed significant homol. with mouse Ly-6 antigens.

IT **126880-43-1**, Glycolipoprotein MACIF (human clone p352-3 precursor protein moiety reduced) **126880-44-2**, Glycolipoprotein MACIF (human clone p352-3 protein moiety reduced)
(amino acid sequence of)

L2 ANSWER 13 OF 13 CA COPYRIGHT 1994 ACS
AN CA112(19):176532v CA
TI CD59, an LY-6-like protein expressed in human lymphoid cells, regulates the action of the complement membrane attack complex on homologous cells
AU Davies, Alexandra; Simmons, David L.; Hale, Geoff; Harrison, Richard A.; Tighe, Helen; Lachmann, Peter J.; Waldmann, Herman
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LO Cambridge CB2 2QH, UK
SO J. Exp. Med., 170(3), 637-54
SC 15-2 (Immunochemistry)
DT J
CO JEMEAV
IS 0022-1007
PY 1989
LA Eng
AN CA112(19):176532v CA
AB A novel cell surface antigen has been identified on a wide range of lymphoid cells and erythrocytes. A monoclonal antibody (mAb) YTH 53.1 (CD59) against this antigen enhanced the lysis of human red cells and lymphocytes by homologous complement. Studies of reactive lysis using different species of C.hivin.5.hivin.6, and of whole serum used as a source of C7-9, indicated that the inhibitory activity of the CD59 antigen is directed towards the homologous membrane attack complex. CD59 antigen was purified from human urine and erythrocyte stroma by affinity chromatog. using the mAb YTH 53.1 immobilized on Sepharose, and, following transient expression of a human T cell cDNA library in COS cells, the corresponding cDNA also identified using the antibody. The CD59 antigen is a small protein (.apprx.20 kD as judged by SDS-PAGE, 11.5 kD predicted from the isolated cDNA) sometimes assocd. with larger components (45 and 80 kD) in urine. The sequence of CD59 antigen is unlike that of other complement components or regulatory proteins, but shows 26% identity with that of the murine LY-6 antigen. CD59 antigen was released from the surface of transfected COS cells by phosphatidylinositol-specific phospholipase C, demonstrating that it is attached to the cell membrane by means of a glycolipid anchor; it is therefore likely to be absent from the surface of affected erythrocytes in the disease paroxysmal nocturnal hemoglobinuria.

IT **126546-12-1**, Antigen CD 59 (human clone YTH53.1/1 precursor protein moiety reduced) **126546-13-2**, Antigen CD 59 (human clone YTH 53.1/1 protein moiety reduced)
(amino acid sequence of)

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